

Appl. No. 10/696,917

Amdt. Dated December 29, 2005

Reply to Office Action of November 28, 2005

REMARKS

This is a full and timely response to the non-final Office action mailed November 28, 2005. Reexamination and reconsideration in view of the foregoing amendments and following remarks is respectfully solicited.

Claims 1-5, 7-17, 19, and 20 are pending in this application, with Claims 1, 12, and 17 being the independent Claims. Claims 1, 12, and 17 have been amended. Claim 18 has been cancelled. No new matter is believed to have been added.

Rejections Under 35 U.S.C. § 112

The Examiner rejected Claims 17-20 under 35 U.S.C. §112, 2 paragraph, as being a definite for failing to particularly point out and distinctly Claim the subject matter which applicant regards as the invention.

The Examiner stated that in Claim 17, line 4, "the smoke detection unit" lacks antecedent basis. The Examiner also stated that it is not clear whether it is the aircraft detection system or it is the smoke detector unit.

Claim 17, at line 4, has been amended to include "the smoke detector unit," which is clearly provided with antecedent basis.

Applicant, accordingly, respectively requests withdrawal of rejections of Claims 17-20 under 35 U.S.C. §112, 2nd paragraph, as being a definite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Rejections Under 35 U.S.C. § 102

The Examiner has rejected Claim 17 under 35 U.S.C. § 102(b) as being anticipated by Kaprelian.

Claim 17 has been amended to include a fan for pulling the air and smoke between the emitter and the detector. Specifically, Claim 17 includes the limitation "a fan for moving the air and smoke from the inlet to the chamber."

Kaprelian discloses a smoke detector which incorporates the features and functions of both light obscuration detection and light absorption detection (col.2, lines 41-45).

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As illustrated in figure one, the body of the smoke detector comprises a base 12 and a series of segmented outer walls 14 and a series of segmented inner walls 16, which are preferably molded from a black and integral with a base 12. The walls 14 and 16 are formed and arranged to allow the ingress of smoke to a smoke chamber 18 while blocking the entrance of ambient light. (col. 3, lines 16-26) Within the smoke chamber 18 is a concave mirror 20, a light emitting diode 24 on one side of the mirror's optical access 22, and a photodiodes 26 on the opposite side of the optical access 22. (col. 3, lines 28-45) A second photodiode 28 is located on the one side of the smoke chamber 18. The second photodiode 28 receives scattered light from smoke within the smoke chamber 18 (col. 3, lines 50-54). Kaprelian makes no mention of a fan used to pull smoke into the smoke chamber 18. Specifically, Kaprelian does not disclose a fan for pulling air and smoke between the emitter and the detector.

Therefore, Claim 17 is not anticipated by Kaprelian because Claim 17 includes a limitation that is not disclosed in Kaprelian. Furthermore, Claim 17 has been amended in accordance with the Examiner's indication that Claim 18 would be allowable if rewritten in independent form including all of the limitations of the base Claim and any intervening Claims.

Applicant, accordingly, respectfully requests the withdrawal of the rejection of Claim 17 under 35 U.S.C. § 102(b) as being anticipated by Kaprelian.

Rejections Under 35 U.S.C. § 103

The Examiner rejected Claims 11, 19, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Kaprelian.

Claim 11 is dependent on Claim 1 and should be allowable for at least the same reasons as Claim 1 stated below. Claims 19 and 20 are dependent on Claim 17 and should be allowable for at least the same reasons as Claim 17 stated above.

Applicant, accordingly, respectfully requests withdrawal of the rejections of Claims 11, 19, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Kaprelian.

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The Examiner rejected Claims 1-5, 7, 8, 12-15, 19, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Kaprelian in view of Kadwell.

Claims 1 and 12 have been amended to include pulling air and smoke between the emitter and the detector with a fan. Specifically, Claims 1 and 12 have been amended to include the limitation "moving at least one of air and smoke through an inlet into a chamber."

As previously discussed, Kaprelian does not disclose moving air and smoke between the emitter and the detector with a fan. Kadwell discloses a smoke detector including a housing defining a dark chamber admitting test with a light receiver disposed therein (Abstract). A scatter emitter is positioned within the chamber such that a light strikes the receiver when reflected off particles suspended in the test atmosphere (Abstract). As illustrated in figure 10, the second receiver is positioned such that light 142 from the obscuration emitter 38 travels along an isolated path different from light 40. The isolated path is free from smoke in the test atmosphere 24. (col. 13, line 55 – 60) this may be accomplished by producing a sealed cavity in the housing 144 between the obscuration emitter 38 and receiver 140 by inserting a light pipe between the obscuration emitter 38 and the receiver 140. (col. 13, lines 61-63) Kadwell makes no mention of a fan for pulling air and smoke between the emitter and the detector. Specifically, Kaprelian and Kadwell do not teach or suggests a fan for pulling air and smoke between the emitter and the detector with a fan.

Therefore, Claims 1 and 12 are patentable over Kaprelian in view of Kadwell because Claims 1 and 12 include limitations that are not taught or suggested by Kaprelian and Kadwell. Furthermore, Claims 1 and 12 have been amended in accordance with the Examiner's indication that Claim 18 would be allowable if rewritten in independent form including all of the limitations of the base Claim and any intervening Claims.

Claims 2-5, 7, 8, and 13-15 are dependent on either Claim 1 or Claim 12 and should be allowable for at least the same reasons as Claims 1 and 12 stated above.

Claims 19 and 20 are dependent on Claim 17 and should be allowable for at least the same reasons as Claim 17 stated above.

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Applicant, accordingly, respectfully requests withdrawal of the rejections of the Claims 1-5, 7, 8, 12-15, 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Kaprelian in view of Kadwell.

The Examiner rejected Claims 9, 10, and 16 35 U.S.C. § 103(a) as being unpatentable over Kaprelian in view of Kadwell and further in view of Solomon.

Claims 9, 10, and 16 are dependent on either Claim 1 or Claim 12 and should be allowable for at least the same reasons as Claims 1 and 12 stated above.

Applicant, accordingly, respectfully requests withdrawal of rejections of Claims 9, 10, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Kaprelian in view of Kadwell and further in view of Solomon.

Allowable Subject Matter

Applicant has noted, with appreciation, that the Examiner indicated Claim 18 would be allowable if rewritten in independent form including all of the limitations of the base Claim and any intervening Claims.

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Conclusion

Based on the above, independent Claims 1, 2, and 12 are patentable over the citations of record. The dependent Claims are also submitted to be patentable for the reasons given above with respect to the independent Claims and because each recite features which are patentable in its own right. Individual consideration of the dependent Claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the Claims.

Hence, Applicant submits that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

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